

**METHOD FOR CALIBRATING A VACUUM THERMAL GRAVIMETRIC  
ANALYZER FOR DETERMINATION OF VAPOR PRESSURES OF  
COMPOUNDS**

**ABSTRACT OF THE INVENTION**

5           The invention provides a method for accurately calibrating a vacuum  
thermogravimetric analyzer (VTGA). The invention solves the problem of calibrating a  
VTGA by using the actual magnetic transitions and associated transition temperatures, or  
Curie temperatures,  $T_c$ 's, of a set of standards which can be used in-situ at the location of  
the sample holder obviating the difficulties associated with indirect methods of  
10       calibration. The invention encompasses a method of using a set of calibration standards  
comprised of a plurality of ferromagnetic slugs to provide a temperature calibration for a  
VTGA. The method permits accurate calibration through sufficiently numerous  
calibration points over a rather limited low-temperature range for determining vapor  
pressures of compounds. Through the use of these standards, highly accurate  
15       measurements can be made of the vapor pressures of critical hard disk drive compounds,  
such as lubricants, and corrosion inhibitors, that are crucial to competitive disk drive  
technology.